



Print Sequencing

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In this lesson, we're going to talk about a concept related to printing. This will not be about the technical aspect of printing. Instead, we're going to learn how to plan a layout of images.

When planning to print a series of images to hang on your wall, either in a row or some sort of arrangement, it's important to think about which images would be appropriate, what size they should be and which images should go next to each other.

Viewing Distance (Timestamp 1:34)

Note that there is a separate Masters Academy lesson on determining the optimal size and viewing distance for your prints. That lesson includes a special spreadsheet that will help you to calculate the best print size and resolution based on your ideal viewing distance. This spreadsheet is also customizable so you can enter in your own desired print sizes. A link to this lesson is included on the course page.

Bayphoto Xpozer Print Sizes & Prices (everything measured in inches)

Print Dimensions in Inches	Diagonal Inches	Whole Print Viewing Distance in Inches	Whole Print Viewing Minimum Resolution	Whole Print Minimum Pixel Dimensions	Whole Print Minimum Megapixels	Casual Viewer Minimum Pixel Dimensions (36" Distance)	Casual Viewer Minimum Megapixels	Critical Viewer Minimum Pixel Dimensions (24" Distance)	Critical Viewer Minimum Megapixels	Xpozer + Print	Xchange Print*
16x16	22.6	17.2	200 PPI	3199x3199	10.2	1528x1528	2.3	2292x2292	5.3	\$38.00	\$26.60
16x20	25.6	19.5	177 PPI	2826x3532	10.0	1528x1910	2.9	2292x2865	6.6	\$42.00	\$29.40
16x24	28.8	21.9	157 PPI	2509x3764	9.4	1528x2292	3.5	2292x3438	7.9	\$49.00	\$34.30
16x48	50.6	38.5	89 PPI	1431x4292	6.1	1528x4584	7.0	2292x6876	15.8	\$88.00	\$61.60
20x20	28.3	21.5	160 PPI	3199x3199	10.2	1910x1910	3.6	2865x2865	8.2	\$51.00	\$35.70
20x24	31.2	23.7	145 PPI	2896x3475	10.1	1910x2292	4.4	2865x3438	9.8	\$54.00	\$37.80
20x30	36.1	27.4	125 PPI	2509x3764	9.4	1910x2865	5.5	2865x4298	12.3	\$75.00	\$52.50
20x40	44.7	34.0	101 PPI	2023x4046	8.2	1910x3820	7.3	2865x5730	16.4	\$91.00	\$63.70
20x60	63.2	48.1	72 PPI	1431x4292	6.1	1910x5730	10.9	2865x8595	24.6	\$129.00	\$90.30
20x80	82.5	62.7	55 PPI	1097x4389	4.8	1910x7640	14.6	2865x11460	32.8	\$162.00	\$113.40
24x24	33.9	25.8	133 PPI	3199x3199	10.2	2292x2292	5.3	3438x3438	11.8	\$69.00	\$48.30
24x30	38.4	29.2	118 PPI	2826x3532	10.0	2292x2865	6.6	3438x4298	14.8	\$88.00	\$61.60
24x36	43.3	32.9	105 PPI	2509x3764	9.4	2292x3438	7.9	3438x5157	17.7	\$99.00	\$69.30
24x48	53.7	40.8	84 PPI	2023x4046	8.2	2292x4584	10.5	3438x6876	23.6	\$129.00	\$90.30
30x30	42.4	32.2	107 PPI	3199x3199	10.2	2865x2865	8.2	4298x4298	18.5	\$105.00	\$73.50
30x40	50.0	38.0	90 PPI	2714x3619	9.8	2865x3820	10.9	4298x5730	24.6	\$129.00	\$90.30
30x45	54.1	41.1	84 PPI	2509x3764	9.4	2865x4298	12.3	4298x6446	27.7	\$145.00	\$101.50

The above spreadsheet will help you to calculate the ideal print size for a specific viewing distance. You can download it from the course page for the "Resolution & Print Size" lesson.

There is a certain viewing distance from which it is ideal to enjoy prints. If you're forced to view the print from too close a distance, you will be forced to look at the fine details of the image and you won't be able to take in the full expanse of the print. I will often use this idea to limit the size of my prints, depending on their environment.

Let's say I have a wall space that is 40 inches wide and I would like to hang a print there. The first thing I would do is stand in front of the wall at a comfortable viewing distance from where the print would hang. In this case, the wall is in a hallway so I will be close to the wall by default. I'll measure the distance between my eyes and the wall. In this example, the distance is 16 inches. Then I'll open the print size spreadsheet. On the left of the spreadsheet, there is a list of various print sizes. Two columns to the right, there is a category titled "Whole Print Viewing Distance in Inches." This tells you how far you'd need to be from the chosen print size in order to take in the entire print without turning your head left and right.

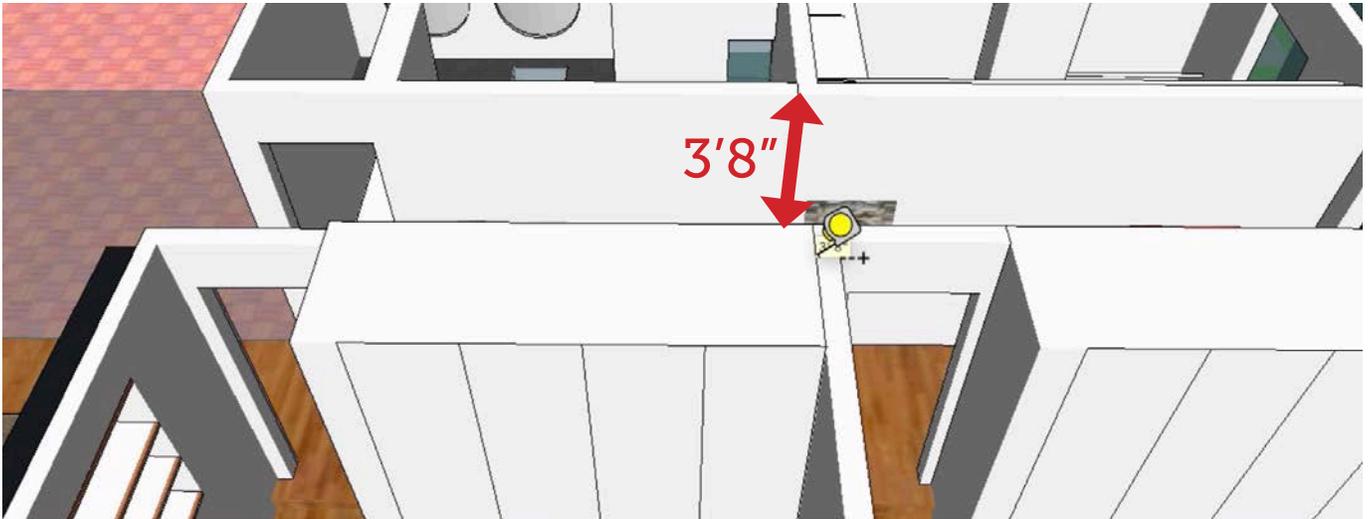
The distance I had measured in the hallway was 16 inches. In that location, I would need to be viewing the print from 16 inches away. Knowing this, I will look down the "Whole Print Viewing Distance" column and see if any items read 16 inches. I don't see any items that read 16 inches. This means that the chart contains no print size that is small enough to be easily viewed from 16 inches away. The smallest print on the chart is 16" x 16" and I will need a print that is smaller than that.

I'd like to see what the viewing distance would be for a 13" x 13" print so I will click within the first print dimension field and change the dimensions from 16" x 16" to 13" x 13". I'll click away from the cell so that the chart updates and then I'll look at the "Whole Print Viewing Distance" field. It now reads 14 inches, which means that in order to ideally view that print size, I'd need to be at least 14 inches away. This tells me that my 13"x 13" print would be a good size for that wall.

Print Dimensions in Inches	Diagonal Inches	Whole Print Viewing Distance in Inches
13x13	18.4	14.0
16x20	25.6	19.5
16x24	28.8	21.9

I changed the first Print Dimensions cell to 13x13 to see what the ideal Whole Print Viewing Distance would be for a print that size. The viewing distance is at least 14".

Now let's look at a bigger space that will display a series of prints. This example is another hallway in my house, but it's much longer. In the video, I am showing you the space via a 3D model of the house I created using a program called SketchUp. In your own space, you can easily just walk around with a tape measure. The 3D model will simply be an easier way for me to show you the space without needing to walk through the house with video cameras.

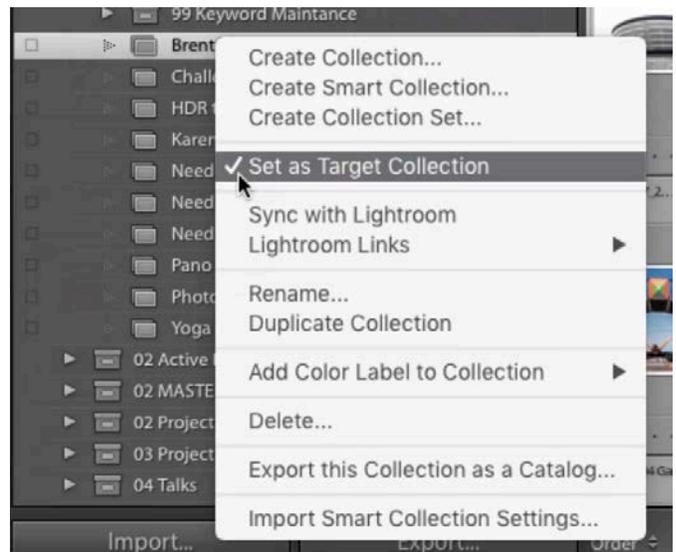


In this 3D model of my house, we are viewing the overhead view of the hallway where I would like to hang a series of prints.

In my hallway, the width is 3'8" wide. I used the program's measuring tool to determine this, but again, you could simply take a measuring tape to find the size of your own space. The total width of my hallway is 3'8" but that's not the distance from which I'll be viewing the prints there. My viewing distance will probably be closer to 2'. I now need to figure out how big of a print I can have if I want to view it from about 2' to 2.5'. I'll go back to the print size spreadsheet and look down through the third column, "Whole Print Viewing Distance in Inches." The closest figure to my ideal distance is 25.8" and that is for a print that is 24" x 24". Another similar distance is 23.7" and this is for a 20" x 24" print. This gives me a good sense for how large of a print I can hang in the hallway where I can enjoy the entirety of it from my ideal viewing distance.

Selecting Images for Printing (7:27)

Setting a target collection Now let's talk about how you can go about choosing which images to print for a certain location. For my house, I created a collection within Lightroom. In this collection, I placed all of the images I would consider for printing and displaying in my home. To make this easier, I designated this collection as the "target collection." The target collection is the one that an active image will be placed into when you tap the B key. By default, this is the Quick Collection. If you designate another collection as the target collection, you can quickly populate the collection by moving through your images and tapping the B key for all images you want to place in the collection. To designate a collection as the target collection, right-click on the collection name and choose "Set as Target Collection" from the pop-up menu. When a collection is set as the target collection, a little plus sign (+) will appear next to its name in the Collections panel.



Right-click on the name of a collection and this menu will appear, giving you the option to set this collection as the target collection.



I know I want to include this image in the print series, so I'll look for other images that share similar features.

Choosing a sequence of images I want to choose a series of images to use in a sequence, but I need to determine which images would look good together and what order they should go in. I also need to see if there are any adjustments I need to make to the images in order to make them look better together.

Looking through the collection I created of potential images, there is one that my eye is immediately drawn to. It's a very colorful images

of a vintage motel with lots of neon lighting. I would like to use this image as one in a series, but I need to make sure that the other images in the series look good with it. To ensure this, I'll look for images that have similar colors or similar saturation. There is another image that has the same color of twilight sky so I'll drag the images next to each other in the collection so that I can see them side by side. Looking through the collection, I'll take all the images that have a similar color of sky and I will drag them next to each other in the collection.

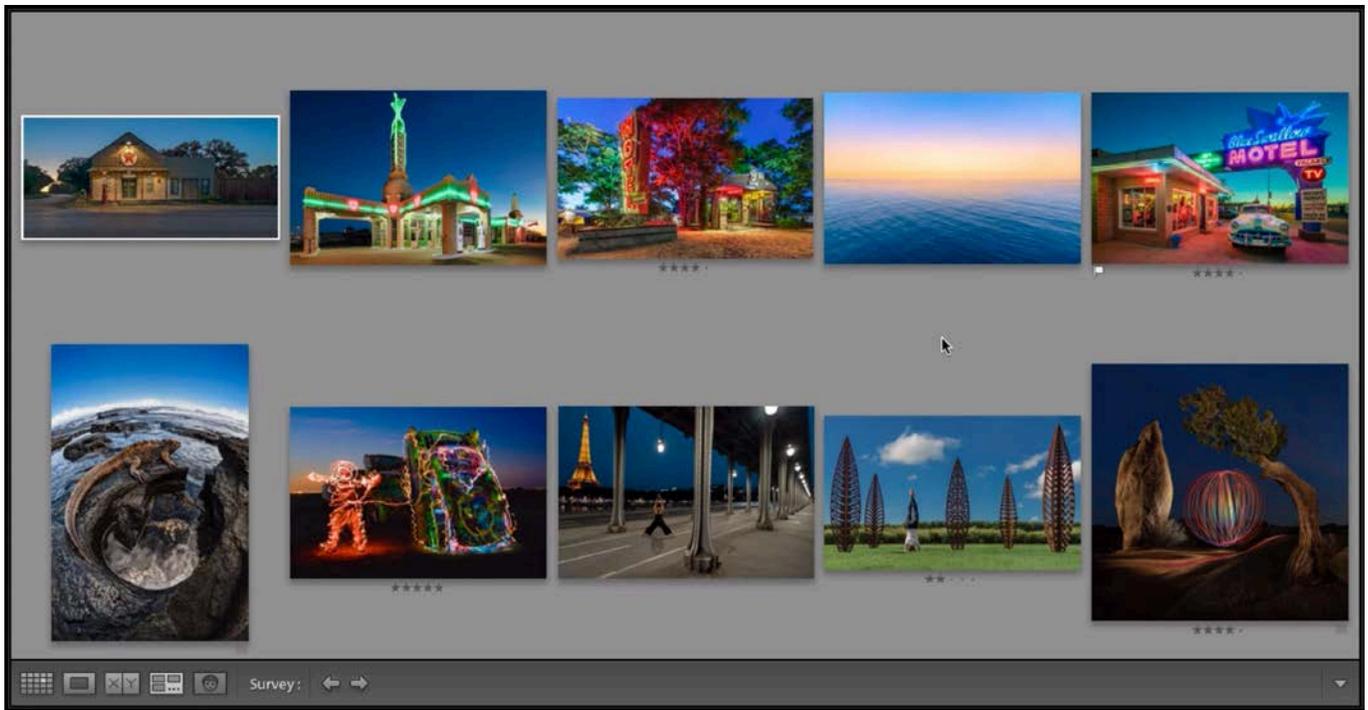


In my Lightroom collection, I looked for all images that had similar sky colors and dragged them together.

Survey View Next, I will select all of the images I had grouped together (the images with similar skies) and I will click on the Survey View icon that is located on the left side of the toolbar that runs below the image window (see screen shot). This will take all of the selected images and show them together in a multi-image comparison view. I know that I want to keep the original neon motel image so I'll consider this the key image. In this view, I'll look through the other images to see which ones I think best go together.



The Survey View will take all selected images and put them in the same window for comparison.



All of the selected images have been placed in the Survey view.

Looking at the images, one of them looks like it has a daytime sky, where all of the others are night skies, so I don't think that one will be good for the series. I'll hover my cursor over the bottom right corner of the thumbnail and an "X" will appear. I'll click on the X to remove this image from the survey view. This does not remove the image from the collection. It simply deselects the image so that it does not appear in this view.



Click the X to remove an image from Survey view.

While in the survey view, I can drag the images around to reposition them. This gives me a better idea of which images look good next to each other. There is another image of a building that has neon and the same sky color so I will drag that next to the motel image. These look great together so I know I'll keep that one.

Continuing to evaluate the other images, I think that the iguana image and the water image both have more of a daytime feel even though the color of the sky is similar to the other images. Since I'm moving toward a nighttime theme, I'm going to remove these images as well.

NOTE: When evaluating a set of images like this, it's important to remember that you can always adjust the images in order to make them match better.

I want to evaluate these images based on both visual similarities and subject matter. I'll remove some of the images because they differ too greatly in subject matter and others because they are visually too different. At the end, I have three images that I think work really well together. They all feature old, vintage-style buildings at dusk and they all contain some vibrant neon.

Now that I have my selections, I'll return to Lightroom's Grid view. I can do this by tapping the G key or by clicking the Grid view icon on the left side of the toolbar below the image window.

Choosing the Image Sequence (23:36)

I now know what images I'm going to print for the hallway, but I still need to decide what order they should be hung in. To determine this, I will look at the shapes in the individual images. Your eye will naturally be drawn to certain areas of an image and it will move across the image in a path determined by a few different factors. In the service station image, my eye is first drawn to the vertical spire and then it moves down along the line of the building toward the sun on the right side of the image. Noticing the way my eye moved through the scene, I can see that this would be a good image to put on the far left because my eye moves to the right and it takes me into the rest of the series.



In this image, my eye is drawn to the tall spire and then it moves down, along the edge of the building, toward the sun.

I'll look next at the photo of the Blue Swallow Motel. Here, my eye is first drawn to the big sign in the upper right and then it moves down to the building on the left. This tells me that this image would work well on the right end of the series because it will pull the viewer to the left and into the series. The angle of the building emphasizes this as well because it angles downward toward the left.

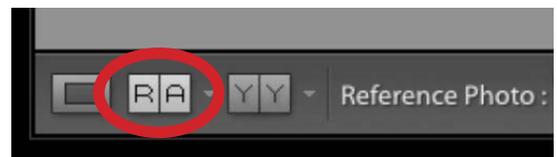


This is the sequence in which the images will be hung on the wall.

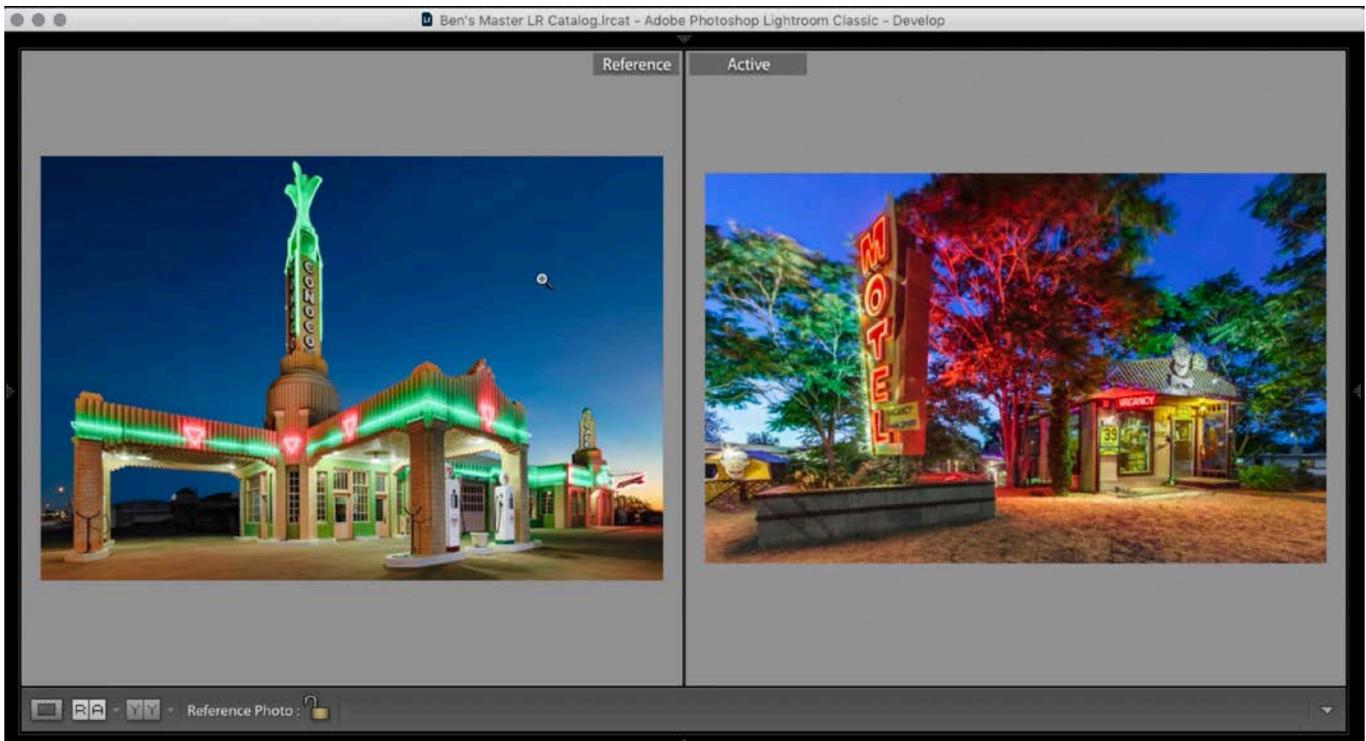
Adjusting the Images (25:08)

Before printing the three selected images, I will first adjust them to ensure that they truly feel like they go together. I think that the skies are going to be the element that really pulls the images together so I want to make sure that all three skies match really well. The sky in the center motel image does not look like it matches the other two images so I'll need to shift the color a bit.

Reference View I'll open that image in the Develop Module in Lightroom. Then, below the image window, I'll click on the Reference view icon (R|A). This will split the screen into two windows with the active image on the right side. I will locate one of the other chosen images (one with the ideal sky) within the Filmstrip at the bottom of the interface and I will drag it into the window on the left. This is the reference window. Now, I can use the adjustment sliders to make changes to the active image on the right while looking at the reference image on the left. This will allow me to better match the active image to the image on the left.



In the Develop Module the Reference view icon can be found in the toolbar below the image window.



This is the Reference view in Lightroom. The active image is on the right. This is the image that will change when the adjustment sliders are moved. The image on the left is the one that can be used as a reference while adjusting the image on the right.

If you wanted to adjust the image in Photoshop, you can get a similar comparison view. With both images open in Photoshop, click on the Window menu and choose Arrange > 2-up Vertical. This will place the two image windows side by side so that you could work on one image while comparing it to the other. After you're done adjusting the image, you can get back to the regular 1-window view by again clicking on the Window menu and choosing Arrange > Consolidate All to Tabs.

Other Ways to Sequence Images (28:00)

Let's look at some other concepts relating to sequencing images. I shoot a series of images with the common theme of vintage trailers. They are all light paintings and they're all shot at night, so I think they would display well together. I would like to find the best way to display these on a wall.

I'll select all of the images in Lightroom and then click on the Survey view icon so that I can view them all in the same window together.

Looking at the images, I can tell that I'm not going to use all of them because there are a couple that look too similar to each other. I can also see that all of the trailers are photographed at an angle except for one, which was shot straight on. This is also the only picture that has a person in it. Because this one is a little different in that it's not angled in some way and it has an element to pull you in, I think this image would work well as the centerpiece in the series.



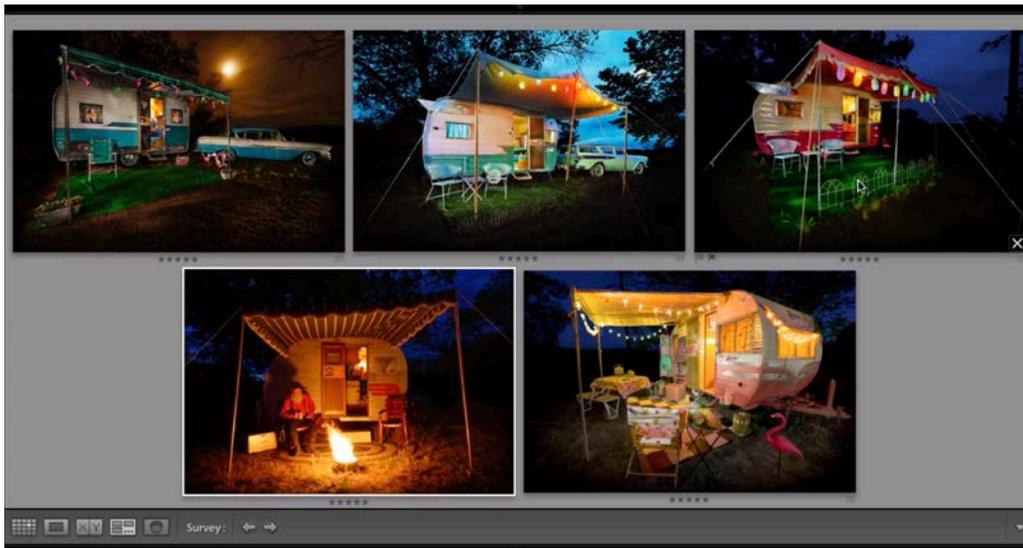
I selected a group of images that I thought would work well together and I clicked on the icon to view them in the Survey view.

Now I'll look at the other images and decide whether the angle of the trailers is going to direct the eye toward the right or to the left. This will determine whether they will go to the left or the right of that center image. Looking at the image of the blue and white trailer, my eye moves from left to right while looking at it. This tells me that it should be placed to the left of the center image so that it draws the viewer into the series. The angles of the dark pink trailer and the teal-colored trailer do the same thing. I will drag these images to the left side of the center image in this survey view.

The light pink trailer is angled downward to the left and my eye moves through the image from right to left. This tells me that this image would work well to the right of the center image because it draws the viewer into the series.



The arrows show the direction my eye moves through these images.



This is the final sequence I decided on by determining which direction each image led me through the series. The three images on top draw me to the right. The bottom left image is the central point and the bottom right image directs my eyes toward the left.

At this point, I want to narrow down the images because I don't want to print and hang all five images. I need to decide which image[s] don't fit in as well with the others. I like that the blue and teal trailers both have cars, which creates some added interest. The dark pink trailer does not have a car, so I will remove that image by clicking the X in the bottom right corner. The blue and teal trailer images are very similar, so I'm only going to keep one. There is no real reason to keep one rather than the other so it all comes down to personal preference here. I'm going to keep the blue trailer image so I will remove the image that contains the teal trailer. This leaves me with my series of three images. The center image is shot straight on, the left image angles to the right, drawing the eye into the middle, and the right image angles to the left, also drawing the eye into the middle.



These are the final three images I decided on, and they will be hung in this order on the wall.

I'll move back to the Grid view (by tapping the G key) and these three images will be the only ones that are selected. The left image, featuring the blue trailer, has a different sky color than the other two images so I will need to adjust it so that all three skies look similar. In this case, that image is a layered TIFF file, so I will need to adjust the image in Photoshop.

In Photoshop, I could use either a Hue/Saturation adjustment layer or a Photo Filter adjustment layer to change the color of the sky so that it matches the other two images. I would also adjust the brightness of all three images so that they all have the same level of brightness. This will also help to make the images feel like a cohesive set.

Note: There is another lesson on sequencing images for slideshows and that lesson can also be useful for sequencing printed images.



A Hue/Saturation adjustment layer was used to change the color of the sky so that it better matches the other two images in the print series.

Another Sequencing Example:



These images are designed to be hung down a long hallway. This image would go on the far right because the angle of her body pulls the eye to the left and into the series.



This image will come next. It ties into the previous image because it shares the somewhat similar colors of blue and aqua. Her clothing is also black in both images.



This next image ties into the previous image because they both contain triangle shapes and she is again wearing black clothing.



Next up down the line, this image ties into the previous one because of the neutral beige color of the surroundings.



This image nicely follows the previous image because of the circular shapes in both images.

When to Print Large vs. Small (37:27)

Another thing to think about when planning to print is that some images are going to be best represented when printed really large. With other images, you can get away with printing them smaller. To determine which images need to be printed large vs. small, I find that it can be useful to look at the images as thumbnails, whether in Lightroom or a different program. If I can understand and enjoy an image as a small thumbnail, then I know I can get away with printing the image small. If, on the other hand, I can't understand or enjoy a print as a thumbnail, then I know that the image will likely need to be printed large in order for the viewer to enjoy it and really see what's going on.



To determine if an image needs to be printed really large, I will look at the image set in a thumbnail view, as shown above. If I can understand an image from this small a size, I know I can get away with printing it small. If I can't tell what's going on, as with the image on the left, then I know it needs to be printed large.